CLAIMS

We claim:

1. A composition for inhibition of inducible COX-2 activity and having minimal effect on COX-1 activity, said composition comprising an effective amount of component I selected from the group consisting of alpha acids and beta acids and an effective amount of at least one component II selected from the group consisting of alpha acids, beta acids, essential oils, fats and waxes, with the proviso that component I and II are not the same compound.

2. The composition of Claim 1 wherein the component I or II is made from a hop extract prepared by CO_2 extraction.

3. The composition of Claim 1 wherein the alpha acids are selected from the group consisting of. humulone, cohumulone, isohumulone, isoprehumulone, hulupone, adhumulone, xanthohumol A and xanthohumol B.

4. The composition of Claim 1 wherein the beta acids are selected from the group consisting of lupulone, colupulone, adlupulone, tetrahydroisohumulone, and hexahydrocolupulone,

5. The composition of Claim 1 wherein the essential oils are selected from the group consisting of. myrcene, humulene, beta-caryophyleen, undecane-2-on, and 2-methyl-but-3-en-ol.

6. The composition of Claim 1 formulated in a pharmaceutically acceptable carrier.

7. The composition of Claim 1, further comprising one or more members selected from the group consisting of antioxidants, vitamins and minerals.

8. The composition of Claim 1, further comprising one or more members selected from the group consisting of proteins, fats, carbohydrates, glucosamine, chondrotin sulfate and amino sugars.

9. A composition for inhibition of inducible COX-2 activity and having minimal effect on COX-1 activity, said composition comprising 30 to 60 percent alpha acids and 15 to 45 percent beta acids.

10. The composition of Claim 9 wherein the alpha acids or the beta acid is from a hop extract prepared by CO_2 extraction.

11. The composition of Claim 9 wherein the CO_2 hop extract contains 0 to 6 percent essential oils and 2 to 8 percent fats and waxes.

12. The composition of Claim 9 wherein the alpha acids are selected from the group consisting of. humulone, cohumulone, isohumulone, isoprehumulone, hulupone, adhumulone, xanthohumol A and xanthohumol B.

13. The composition of Claim 9 wherein the beta acids are selected from the group consisting of. lupulone, colupulone, adlupulone, tetrahydroisohumulone, and hexahydrocolupulone.

14. The composition of Claim 11 wherein the essential oils are selected from the group consisting of. myrcene, humulene, beta-caryophyleen, undecane-2-on, and 2-methyl-but-3-en-ol.

15. The composition of Claim 9 formulated in a pharmaceutically acceptable carrier.

16.. The composition of Claim 9, further comprising one or more members selected from the group consisting of antioxidants, vitamins and minerals.

17. The composition of Claim 9, further comprising one or more members selected from the group consisting of proteins, fats, carbohydrates, glucosamine, chondrotin sulfate and amino sugars.

18. A composition for inhibition of inducible COX-2 activity and having minimal effect on COX-1 activity, said composition comprising 30 to 60 percent alpha acids and 3 to 6 percent essential oil.

19. The composition of Claim 18 wherein the alpha acids or the essential oil is from a hop extract prepared by CO_2 extraction.

20. The composition of Claim 19 wherein the CO_2 extract of hops contains 2 to 8

percent fats and waxes.

21. The composition of Claim 18 wherein the alpha acids are selected from the group consisting of. humulone, cohumulone, isohumulone, isoprehumulone, hulupone, adhumulone, xanthohumol A and xanthohumol B.

22. The composition of Claim 18 wherein the essential oils are selected from the group consisting of. myrcene, humulene, beta-caryophyleen, undecane-2-on, and 2-methyl-but-3-en-ol.

23. The composition of Claim 18 formulated in a pharmaceutically acceptable carrier.

24. The composition of Claim 23, further comprising one or more members selected from the group consisting of antioxidants, vitamins and minerals.

25. The composition of Claim 23, further comprising one or more members selected from the group consisting of proteins, fats, carbohydrates, glucosamine, chondrotin sulfate and amino sugars.

26. A composition for the inhibition of inducible COX-2 activity and having minimal effect on COX-1 activity, said composition comprising 15 to 45 percent beta acids and 3 to 6 percent essential oil.

27. The composition of Claim 26 wherein the beta acids or the essential oil is from a hop extract prepared by CO_2 extraction.

28. The composition of Claim 27 wherein the CO_2 extract of hops contains 2 to 8 percent fats and waxes.

29. The composition of Claim 26 wherein the beta acids are selected from the group consisting of lupulone, colupulone, adlupulone, tetrahydroisohumulone, and hexahydrocolupulone

30. The composition of Claim 26 wherein the essential oils are selected from the group consisting of. myrcene, humulene, beta-caryophyleen, undecane-2-on, and 2-methyl-but-3-en-ol.

31. The composition of Claim 26 formulated in a pharmaceutically acceptable carrier.

32. The composition of Claim 31, further comprising one or more members selected from the group consisting of antioxidants, vitamins and minerals.

33. The composition of Claim 31, further comprising one or more members selected from the group consisting of proteins, fats, carbohydrates, glucosamine, chondrotin sulfate and amino sugars.

34. A composition for the inhibition of inducible COX-2 activity and having minimal effect on COX-1 activity, said composition comprising 30 to 60 percent alpha acids, 15 to 45 percent beta acids and 3 to 6 percent essential oil.

35. The composition of Claim 34 wherein the alpha acids, beta acids or the essential oil is from a hop extract prepared by CO_2 extraction.

36. The composition of Claim 34 wherein the CO_2 extract of hops contains 2 to 8 percent fats and waxes.

37. The composition of Claim 34 wherein the alpha acids are selected from the group consisting of. humulone, cohumulone, isohumulone, isoprehumulone, hulupone, adhumulone, xanthohumol A and xanthohumol B.

38. The composition of Claim 34 wherein the beta acids are selected from the group consisting of. lupulone, colupulone, adlupulone, tetrahydroisohumulone, and hexahydrocolupulone,

39. The composition of Claim 34 wherein the essential oils are selected from the group consisting of. myrcene, humulene, beta-caryophyleen, undecane-2-on, and 2-methyl-but-3-en-ol.

40. The composition of Claim 34 is formulated in a pharmaceutically acceptable carrier.

41. The composition of Claim 40, further comprising one or more members selected from the group consisting of antioxidants, vitamins and minerals.

42. The composition of Claim 41, further comprising one or more members selected from the group consisting of proteins, fats, carbohydrates, glucosamine, chondrotin sulfate and amino sugars.

43. A method of dietary supplementation in animals comprising administering to an animal suffering symptoms of inflammation a composition for inhibition of inducible COX-2 activity and having minimal effect on COX-1 activity, said composition comprising an effective amount of component I selected from the group consisting of alpha acids and beta acids and an effective amount of at least one component II selected from the group consisting of alpha acids, beta acids, essential oils, fats and waxes, with the proviso that component I and II are not the same compound.

44. The method of Claim 43 wherein the composition is formulated in a dosage form such that said administration provides from 0.01 to 100 mg body weight per day of alpha acids, from 0.01 to 100 mg body weight per day of beta acids, and from 0.01 to 100 mg/kg body weight per day of essential oils.

45. The method of Claim 44, wherein the composition is administered in an amount sufficient to maintain a serum or target tissue concentration of 0.001 to 10,000 ng/mL of an active ingredient selected from the group of alpha-acids, beta-acids or essential oils.

46. The method of Claim 44 wherein said animal is selected from the group consisting of humans, non-human primates, dogs, cats, birds, horses, reptiles, fish, amphibians and ruminants.

47. The method of Claim 44 wherein administration is by a means selected from the group consisting of oral, parenteral, topical, transdermal and transmucosal delivery.

48. A method of therapeutic treatment in animals comprising administering to an animal suffering symptoms of arthritis a composition for inhibition of inducible COX-2 activity and having minimal effect on COX-1 activity, said composition comprising an effective amount of component I selected from the group consisting of alpha acids and beta acids and an effective amount of at least one component II selected from the group consisting of alpha acids, beta acids, essential oils, fats and waxes, with the proviso that component I and II are not the same compound and continuing said administration until said symptoms are reduced.

49. A method of therapeutic treatment comprising applying to the skin of a human suffering symptoms of acne rosacea a lotion comprising a composition for inhibition of inducible COX-2 activity and having minimal effect on COX-1 activity, said composition comprising an effective amount of component I selected from the group consisting of alpha acids and beta acids and an effective amount of at least one component II selected from the

group consisting of alpha acids, beta acids, essential oils, fats and waxes, with the proviso that component I and II are not the same compound and continuing said administration until said symptoms are reduced.

50. A method of therapeutic treatment comprising applying to the skin of a human suffering symptoms of psoriasis a lotion a composition for inhibition of inducible COX-2 activity and having minimal effect on COX-1 activity, said composition comprising an effective amount of component I selected from the group consisting of alpha acids and beta acids and an effective amount of at least one component II selected from the group consisting of alpha acids, beta acids, essential oils, fats and waxes, with the proviso that component I and II are not the same compound and continuing said administration until said symptoms are reduced.